



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of)

Mantravadi et al)

Serial No. 10/791,314)

Filed: March 1, 2004)

For: **HIERARCHICAL CODING WITH
MULTIPLE ANTENNAS IN A
WIRELESS COMMUNICATION
SYSTEM**

) Examiner:

) Group No. 2661

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants submit herewith, in accordance with 37 CFR § 1.98, the patents, publications and other information listed on the enclosed Form PTO-1449.

04/01/2005 AWONDAF1 00000103 170026 10791314

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CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

MAILING

- ☒ deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: March 29, 2005Depositor's Name Susanna Vargas

(type or print name)

Signature: [Signature]**FACSIMILE**

- ☐ transmitted by facsimile to the Patent and Trademark Office.

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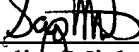
The references submitted herewith are those of which Applicants are aware, which they believe may be material to the examination of this application and, with respect to which there may be a duty to disclose in accordance with 37 CFR § 1.56. While the references identified may be material to the examination of this application pursuant to 37 CFR § 1.56, the citation of these references is not intended to constitute an admission that any reference referred to herein is prior art to the invention of this application unless specifically designated as such. Additionally, the filing of this Information Disclosure Statement shall not be construed to mean that any search has been made or, that if made, such search was complete or exhaustive, or that no other material information as defined in 37 CFR § 1.56 exists.

This Information Disclosure Statement is being submitted in accordance with 37 CFR § 1.97(c). A list of the references is set forth on Form PTO-1449, which is enclosed herewith, along with a copy of each cited reference (copies of U.S. references are not enclosed). Applicants respectfully request that the Examiner return to Applicants a copy of the Form PTO-1449 indicating consideration of the references cited thereon.

Please charge Deposit Account No. 17-0026 of QUALCOMM Incorporated in the amount of \$180.00 for the fee set forth in 37 CFR § 1.17(p). The Commissioner is hereby further authorized to charge payment of any additional fees that may be required, or credit any overpayment, to Deposit Account No. 17-0026. A duplicate of this sheet is enclosed.

Respectfully submitted,

Dated: March 29, 2005

By: 
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FORM 1449 (REV. 7-80) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) MAR 31 2005 PATENT & TRADEMARK OFFICE DATE MAILED: March 29, 2005	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 030213	SERIAL NO. 10/791,314
	APPLICANT Mantravadi et al		
	FILING DATE March 1, 2004	GROUP	

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1						
	A2						

U.S. PATENT APPLICATION PUBLICATION DOCUMENTS

*EXAMINER INITIAL		PUBLICATION NUMBER	PUB. DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	B1						
	B2						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	Ref No	DOCUMENT NUMBER	DATE	COUNTRY	NAME	CLASS	SUB CLASS
	C1	WO 02/089371 A1	11/7/02	PCT	Hughes Electronics Corp.		
	C2	WO 01/39456 A1	5/31/01	PCT	Thomson Licensing		

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Page, Etc.)

	D1	Kannan Ramchandran et al, "MULTIRESOLUTION BROADCAST FOR DIGITAL HDTV USING JOINT SOURCE/ CHANNEL CODING", 1/1/93, PAGES 6-22
	D2	E.G. Larsson et al, "Space-Time Block Coding for Wireless Communications", 5/03, whole document
	D3	Thomas M. Cover, "Broadcast Channels" 01/72, page 2
	D4	Heath et al, "Multiuser diversity for MIMO wireless systems with linear receivers", 11/4/01, page 1195
	D5	Amroui et al, "Coding for the MIMO broadcast channel", 6/29/03, page 296
	D6	Ten Brink et al, "Detection thresholds of iterative MIMO processing", 6/30/02, whole document
	D7	Witzke et al, "Iterative detection of MIMO signals with linear detectors", 11/03/02, pgs 289-293
	D8	Yisheng et al, "Cooperated TDMA unlink based on hierarchically modulated alamouti code", 2/18/04, page 201
EXAMINER		DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		